



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,656	07/13/2001	Sang IL Seo	0630 - 1284P	1832

2292 7590 07/08/2005

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

NATNAEL, PAULOS M

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,656

Applicant(s)

SEO ET AL.

Examiner

Paulos M. Natnael

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-17 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-17 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **2,3,5-16, 20,22,24-26** are rejected under 35 U.S.C. 102(b) as being anticipated by Carr et al., U.S. Patent No. **5,608,446**.

Considering claim **2 (as amended)**, Carr et al disclose the following claimed subject matter, note;

a) judging whether a transmission of an OSD is needed or not, is met by Router **42**, fig.1;

b) if so, checking a volume of the OSD, is met by Control Processor **48**, fig.1;

c) determining whether a volume of the OSD is larger than a certain volume, and if so transmitting the OSD in digital form to a switching unit through an analog connection, and if the volume is not larger than the certain volume, transmitting the OSD in digital form to a switching unit through a digital connection, is met by the Control Processor **48**, as discloses on col. 8, lines 29-55 that "...The router

Art Unit: 2614

transmits at least the packet header to control processor 48 which makes a determination of whether to have the information transmitted via the modem link over the public switched telephone network 24 or via the cable television distribution system utilizing the larger bandwidth channel carried by cable 36 to the user's customer premise equipment 20. In the illustrative example, a determination is made that the relatively small amount of data would be most efficiently handled and bandwidth conserved by the system by routing it via the modem and PSTN network...

Considering claim 3, the method according to claim 2, wherein the digital AV contents are transmitted through a digital connection while the OSD is transmitted through the analog connection;

See rejection of claim 2(c).

Considering claim 5, the method according to claim 2, further comprising, transmitting an indication signal to indicate whether the OSD is being transmitted through the analog connection, is met by the disclosure that "the router transmits at least the packet header to control processor 48..."(col. 8, lines 41-42)

Considering claim 6,

a) receiving the AV contents, the OSD and the indication signal at a signal input apparatus, is met by control processor 48, fig. 1.

Art Unit: 2614

b) processing the indication signal at the signal input apparatus to switch between a first input terminal for the analog signal and a second input terminal for the digital AV content, is met by control processor 48, fig. 1.

Considering claim 7, the method according to claim 2, wherein said step of judging whether a transmission of an OSD is needed or not, includes sensing a user's input requesting a setting status or command to change a control parameter, is met by the disclosure the user now transmits a specific request for information concerning the price and volume history of a stock for the past week. This request is transmitted through the public switched telephone network 24 and routed to enhanced service provider 10A through router 42 in the manner previously described. (col. 8, lines 29-34)

Considering claim 8, the method according to claim 7, wherein the user's input is received via a remote control, is met by the disclosure that the user now transmits [remotely] a specific request for information concerning the price and volume history of a stock for the past week. This request is transmitted through the public switched telephone network 24 and routed to enhanced service provider 10A through router 42 in the manner previously described. " (col. 8, lines 29-34)

Considering claim 9, **(as amended)** a system comprising a signal output apparatus including:

Art Unit: 2614

a) an audio/video (AV) data source for transmitting digital AV content, is met by

Enhance Service Provider 10A-10N, fig.1;

b) an on screen display (OSD) generating unit for generating an OSD, is met by

Enhance Service Provider 10A-10N, fig.1;

c) a first controlling unit for controlling operation conditions of said AV data source and said OSD generating unit, is inherent in such systems which are controlled by a computer or microcomputer or personal computer.

d) a digital transmission terminal connected to said AV data source, is met by telecommunication network, fig.1;

e) an analog transmission terminal... is met by the cable distribution head end 30A-30N fig.1;

f) wherein when said first controlling unit judges that an OSD is needed, said first controlling unit checks a size of the needed OSD, compares a size of the needed OSD to a preset size, and based upon the comparison, transmits the OSD over one of the digital transmission terminal or the analog transmission terminal to a switching unit, is met by the control processor 48, fig.1;

Considering claim **10**, the system according, to claim 9, wherein if the size of the OSD exceeds the preset size, the OSD is transmitted over the analog transmission terminal;

See rejection of claim 2(c);

Art Unit: 2614

Considering claim **11**, the system according to claim 10, wherein the digital AV contents are transmitted over the digital transmission terminal at the same time that the OSD is transmitted over the analog transmission terminal;

See rejection of claim 2(c);

Considering claim **12**, the system according to claim 9, wherein if the size of the OSD does not exceeds the preset size, the OSD is transmitted over the digital transmission terminal;

See rejection of claim 2(b).

Considering claim **13**, The system according to claim 12, wherein the digital AV contents are transmitted over the digital transmission terminal at the same time that the OSD is transmitted over the digital transmission terminal;

See rejection of claim 2(c).

Considering claim **14**, the system according to claim 9, further comprising:
a remote control, wherein said first controlling unit judges that an OSD is needed by sensing a user's input on said remote control;

See rejection of claim 8.

Considering claim **15**, The system according to claim 9, wherein said first controlling unit transmits an indication signal to indicate whether the OSD is

Art Unit: 2614

being transmitted through the analog transmission terminal or the digital transmission terminal.

See rejection of claim 7.

Considering claim **16**, the system according to claim 15, wherein the indication signal is transmitted over the digital transmission terminal.

See rejection of claim 7.

Considering claim 20, Carr teaches that a graphical user interface at the PC provides the user with buttons to specify the bandwidth (Abstract) i.e., can be used to change the setting or the parameters of the appliance.

As to claim **22**, see rejection of claim 9.

Regarding claim **24**, see rejection of claim 2;

Regarding claims **25** and **26**, see rejection of claim 2;

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2614

4. Claims **17, 19,21,23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr et al., U.S. Pat. No. 5,488,412.

Considering claim **17**, the system according to claim 15, further comprising:

a) a signal input apparatus physically separate from said signal output apparatus, is implied because an input has to be physically separate from output terminal or apparatus in any electronic system.

c) a second controlling unit for controlling the switching unit, is met by Personal Computer 74 and Home Controller 70, Fig.1;

d) the switching unit to select the OSD in either analog form or digital form;
see rejection of claim 2 (c).

Except for;

b) an MPEG decoder unit for connection to said digital transmission terminal;

Regarding b), Carr et al. do not specifically disclose an MPEG decoder. However, the examiner takes Official Notice in that it is notoriously well known to utilize an MPEG decoder in a TV broadcasting receiver such as the subscriber equipment 20 (Fig.1) of Carr et al to decode MPEG coded signals and, therefore, it would have been obvious to the skilled in the art at the time the invention was

Art Unit: 2614

made to modify the system of Carr et al by providing the well known MPEG decoder in order to decode MPEG encoded signals (since the Carr et al. system already is capable of receiving digital broadcast signals), thus, making the system more versatile, less costly overall, and a lot more useful to the subscriber.

Considering claims **19 and 23**, Carr does not specifically disclose transmitting in real time. However, Carr discloses data communications apparatus and methods employing a bidirectional low bandwidth channel and a unidirectional high bandwidth channel. A PC is coupled to an information source by a communications system which provides both a bidirectional low bandwidth channel between the PC and the information source and a high bandwidth channel in which the information source is the source and the PC is the sink. A component of the communications system termed the director responds to a message received in the low bandwidth channel by switching the information being sent from the information source to the PC to the high or low bandwidth channel as specified in the message. (see Abstract of the disclosure) Such systems are well known in the art that are capable of transmitting live broadcasts of sports events, for example, and therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Carr to transmit in real time or live OSD data such as EPG etc. so that the subscriber or user would benefit from such live transmission and re-arrange or manipulate the time for the desired program to be watched accordingly.

Considering claim 21, that the claimed digital connection includes an IEEE 1394 interface, as admitted by Applicant in the discussion of background of invention, is notoriously well known in the art of digital television and/or video/data transmission. In that regard, Carr discloses that "the personal computer receives information which is addressed to the user as transmitted over the cable television system thereby enabling substantially higher transmission rates to be accomplished from the enhanced service provider to the end user as contrasted with the rate at which information could be transmitted from the user by modem 76.s used herein, "modem" means a bidirectional interface between a computer and communications channel; it may utilize analog or digital signaling depending on the communication channel (col.4, line 63 thru col. 5, line 6) Carr also teaches Ethernet connection, etc. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Carr by providing a 1394 interface in order to obtain an efficient, i.e., faster or higher information transfer rate, and/or reliable transmission of data.

Response to Arguments

5. Applicant's arguments filed 3-28-05 have been fully considered but they are not persuasive. Applicant argues that in Carr et al., there is no transmitting the OSD through either an analog connection or a digital connection depending on the volume of the OSD, as recited in independent claim 2, and there is no transmitting the OSD over either a digital terminal or an analog terminal

Art Unit: 2614

depending on the size of the OSD, as recited in independent claim 9. On page 4 of the last Office Action, the Examiner states that the determining and transmitting steps of claim 2 are met by the control processor 48 of Carr et al. However, the process of determining which route to use to transmit the information involves selecting either the high-speed channel 26 or the high-speed channel 28, which are both analog channels in which information is transmitted in analog form. This is also acknowledged by the Examiner in the last Office Action on page 7, where the Examiner equates "an analog transmission terminal" in claim 9 to the cable distribution head-end 30 connected to the high-speed channels. Furthermore, regarding independent claim 2, the feature of transmitting the OSD in digital form if the volume of the OSD is not larger than the certain volume is not anticipated by Carr et al. ***In Carr et al. if the volume of data to be transmitted is large, then the high-speed channel is used, whereas if the volume is small, then the low-speed channel is used, so that the information can be transmitted quickly. In contrast, in Applicants' embodied invention, if the volume of the OSD is large then the OSD is transmitted in analog form whereas if the volume is small, then the OSD is transmitted in digital form. This allows the OSD to be transmitted in real time even if the volume of the OSD is large by using the analog transmission and freeing up the digital channel for the AV contents.***

Moreover, although Carr et al. discloses that information from the service providers is transmitted to the customer premise equipment 20, Carr et al. does not specify anywhere that the information is an OSD, which is a well known term

Art Unit: 2614

in the ad that has a specific meaning. Therefore, there is no OSD in Carr et al. In addition, in Carr et al. the information is transmitted over the low speed channel 26 to the PSTN, or over the high speed channel 28 to the cable head end 30. In clear contrast, in Applicants' embodied invention, the OSD is transmitted to one source (a switching unit) whether the OSD is transmitted over an analog or digital terminal/connection... Therefore, Carr et al. fails to teach or suggest, inter alia determining whether the volume of the OSD is larger than a certain volume, and if so transmitting the OSD in analog form to a switching unit through an analog connection, and if the volume of the OSD is not larger than the certain volume, transmitting the OSD in digital form to the switching unit through a digital connection as recited in independent claim 2.

The examiner submits that Carr discloses data communications apparatus and methods employing a bidirectional low bandwidth channel and a unidirectional high bandwidth channel. A PC is coupled to an information source by a communications system which provides both a bidirectional low bandwidth channel between the PC and the information source and a high bandwidth channel in which the information source is the source and the PC is the sink. A component of the communications system termed the director responds to a message received in the low bandwidth channel by switching the information being sent from the information source to the PC to the high or low bandwidth channel as specified in the message.

Art Unit: 2614

As to the argument that channels 26 and 28 are both analog channels, Carr discloses that "During the communication session, each modem provides a duplex communication link between the customer premise equipment 20 and at least one of the enhanced service providers 10A-10N. The modems translate the incoming analog signals into digital format carried by the ETHERNET network 50." Col. 4, lines 26-32.

Carr does not use the term On-screen Display (OSD). However, as is known in the art, an on-screen display (OSD) is an on-screen control panel on a computer monitor or television screen that allows the user to select viewing options and/or adjust the parameters of an appliance such as the TV, for example. In that regard, a graphical user interface (GUI) is considered an OSD. Carr teaches such an interface. As illustrated above in the rejection, Carr teaches that "...The split channel bridging unit receives the digital information contained in packets and may translate it into a broadband signal imposed on an RF carrier which is transmitted over a communication channel 28 to the one of the cable television distribution head-ends 30A-30N which serves the corresponding subscriber. Other sources of information and cable television programming is delivered to the cable distribution head-ends by cable sources 32 over communication channels 34. The head-end units multiplex the received signals into cable television bandwidth signals such as comprising 6 megahertz channels which are then broadcast by respective cable systems to the cable TV subscribers associated with each head-end distributor. Thus, many users can be served by one 6 megahertz channel. (col. 3,25-43)

Art Unit: 2614

Contrary to applicant's assertion, Carr teaches the above cable television distribution, but Carr does not preclude the cable television distribution 30A-30N from being analog transmission. In fact, Carr teaches that the router transmits at least the packet header to control processor 48 which makes a determination of whether to have the information transmitted via the modem link over the public switched telephone network 24 or via the cable television distribution system utilizing the larger bandwidth channel carried by cable 36 to the user's customer premise equipment 20. In the illustrative example, a determination is made that the relatively small amount of data would be most efficiently handled and bandwidth conserved by the system by routing it via the modem and PSTN network. col. 8, lines 40-55

In other words, the cable distribution system is a conventional cable television carrying RF modulated channels assembled and transmitted by cable television distribution head-end unit 30N. It is well known in the art that this cable television distribution system was designed to transmit mainly analog television channels. Nowadays, of course, the cable system is carrying digital signals as well.

As to the argument that in Applicants' embodied invention, the OSD is transmitted to one source (a switching unit) whether the OSD is transmitted over an analog or digital terminal/connection, the router in the Carr reference is a switching system that can receive and switch the data received to a desired destination. Therefore, the argument in this regard is unpersuasive.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnael
Primary Examiner
Art Unit 2614

July 4, 2005